Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

77. (Previously Presented) Processor-executable code, comprising:

code to determine a trajectory of a first simulated object, the trajectory associated with a prior position of the first object, simulated motion of the first simulated object being associated with motion of a physical object of a computer interface device;

code to simulate a second simulated object configured to impede the simulated motion of the first simulated object when the trajectory of the first simulated object intersects the second simulated object;

code to display a simulated interaction between the first simulated object and the second simulated object; and

code to provide a force feedback via a force feedback mechanism, the force feedback being associated with the simulated interaction of the first simulated object with the second simulated object.

78. (Currently Amended) The processor-executable code of claim 77, wherein the code to provide [[a]] <u>the</u> force feedback includes code to provide a restoring force ~~that is~~ proportional to a magnitude of a simulated penetration [[of]] <u>between</u> the first simulated object and the second simulated object.

79. (Currently Amended) The processor-executable code of claim 78, wherein the restoring force includes a spring force ~~having the mathematical form:~~

$\cancel{F = kx}$

~~where F is the restoring force, x is~~ calculated based on a magnitude of a deviation ~~of the spatial correlation including a deviation~~ between [[the]] a current location of the first simulated object and a location of the first simulated object had the simulated penetration occurred ~~and k is a spring constant parameter~~.

80. (Currently Amended) The processor-executable code of claim [[79]] 78, wherein the restoring force ~~includes a damping force and the restoring force has the mathematical form:~~

~~$F = kx + bv$~~

~~where F is the restoring force, x is~~ calculated based on a magnitude of a deviation ~~of the spatial correspondence including a deviation~~ between [[the]] a current location of the first simulated object and a location of the first simulated object had the simulated penetration occurred, the restoring force including a damping force based on a sensed velocity of the physical object. ~~v is a function of a velocity of the physical object, and k and b are constant parameters.~~

81. (Currently Amended) The processor-executable code of claim [[80]] 78, wherein the restoring force includes an inertial force corresponding to movement of the second simulated object in response to the simulated interaction between the second simulated object and the first simulated object ~~and the restoring force has the mathematical form:~~

~~$F = kx + bv + ma$~~

~~where F is the restoring force, x is a magnitude of a deviation of the spatial correspondence including a deviation between the current location of the first simulated object and a location of the first simulated object had the simulated penetration occurred, v is a function of a velocity of the physical object, a is a function of an acceleration of the physical object, and k, b and m are constant parameters~~.

82. (Previously Presented) The processor-executable code of claim 78, wherein the code to provide the restoring force includes a component associated with friction between the first simulated object and a simulated spatial environment.

83. (Previously Presented) The processor-executable code of claim 77, wherein the code to simulate the second simulated object is associated with motion of a second physical object of a second computer interface device.

84. (Currently Amended) The processor-executable code of claim 78, wherein the code to provide the restoring force includes a weighting factor such that a simulated location L of the first and second simulated objects is output on a display~~, the location L being determined by the equation:~~

$$\cancel{L = [[\frac{(w_1 x_z + w_2 x_2)}{(w_1 + w_2)}]].}$$

85. (Previously Presented) The processor-executable code of claim 77, the interface device being a first interface device wherein the code to simulate the motion of the first simulated object is associated with a first processor, and the code to simulate the second object is associated with a second processor the second processor being associated with input from a second interface device, the first processor and the second processor being coupled such that input signals from the first interface device are associated with input signals from the second interface device.

86. (Previously Presented) A method, comprising:

updating data values associated with a first graphical object based on movement of at least a portion of a force feedback device;

determining whether the first graphical object has engaged a second graphical object based on a path of the first graphical object associated with a prior position of the first graphical object;

displaying in a graphical environment the first graphical object as remaining engaged with the second graphical object if it is determined that the path of the first graphical object passes through the second graphical object; and

outputting a force feedback signal to at least one actuator of the force feedback device, the force feedback signal being operative to output an opposing force on at least a portion of the force feedback device in a direction approximately opposite to the path of the first graphical object while the first graphical object engages the second graphical object.

87. (Previously Presented) The method of claim 86, wherein the opposing force is a restoring spring force.

88. (Previously Presented) The method of claim 86, wherein at least a portion of the second graphical object is fixed in location within the graphical environment.

89. (Previously Presented) The method of claim 86, the force feedback device being a first force feedback device, the method further comprising:

updating data values associated with the second graphical object based on movement of at least a portion of a second force feedback device.

90. (Previously Presented) The method of claim 89, wherein the first force feedback device is coupled to a first host computer, and the second force feedback device is coupled to a second host computer, the second host computer being coupled to the first host computer via a network connection.

91. (Previously Presented) The method of claim 90, wherein the network is the World Wide Web.

92. (Previously Presented) The method of claim 86, wherein the outputting the force feedback signal includes outputting a friction force to the first force feedback device when at least a portion of the first force feedback device is moved in a direction corresponding to a direction approximately perpendicular to the path of the first graphical object while the first and second graphical objects are engaged.

93. (Previously Presented) The method of claim 92, wherein the opposing force is a restoring spring force, and the friction force has a magnitude associated with a magnitude of the restoring spring force.

94. (Previously Presented) A method, comprising:

moving a first graphical object in response to movement of at least a portion of a force feedback device;

determining whether the first graphical object has engaged a second graphical object based on path of the first graphical object in the graphical environment, the path determined at least in part by a previous location of the first graphical object; and

providing force feedback via at least one actuator of the force feedback device coupled to a host computer the force feedback including

an opposing force on the force feedback device, the opposing force causing at least a portion of the force feedback device to move in a direction approximately opposite to the path of the first graphical object while the first graphical object is engaged with the second graphical object; and

a friction force on the force feedback device, the friction force causing at least a portion of the force feedback device to move in a direction corresponding to a direction approximately perpendicular to the path of the first graphical object while the first graphical object is engaged with the second graphical object.

95. (Previously Presented) The method of claim 94, wherein the opposing force is a spring force, and wherein the friction force has a magnitude associated with a magnitude of the spring force.

96. (Previously Presented) The method of claim 94, further comprising:

simulating a rigidity of the second graphical object by displaying the first graphical object as remaining engaged with the second graphical object when the path of the first graphical object passes through the second graphical object.

97. (Previously Presented) A method, comprising:

moving a first graphical object in response to movement of at least a portion of a tactile feedback device;

computing a path of the first graphical object based on at least a prior location of the first graphical object;

determining whether the first graphical object has collided with a second graphical object based on the path of the first graphical object in the graphical environment;

displaying the first graphical object as remaining engaged with the surface of the second graphical object when the path of the first graphical object passes through the surface of the second graphical object according to the movement of the portion of the tactile feedback device; and

providing tactile feedback via at least one actuator of the tactile feedback device, the tactile feedback corresponding with the displayed interaction between the first graphical object and the second graphical object.

98. (Previously Presented) The processor executable code of claim 83, wherein the first computer interface device is configured to be coupled to a first computer, and the second computer interface device is configured to be coupled to a second computer, the second computer configured to communicate with the first computer.

99. (Currently Amended) A processor readable medium having processor-executable code stored thereon, the code performing a method comprising [[to]]:

~~determine~~ determining a trajectory of a first simulated object, the trajectory associated with a prior position of the first simulated object, simulated motion of the first simulated object being associated with motion of a physical object of a computer interface device;

~~simulate~~ simulating a second simulated object configured to impede the simulated motion of the first simulated object when the trajectory of the first simulated object intersects the second simulated object;

~~display~~ displaying a simulated interaction between the first simulated object and the second simulated object; and

~~provide~~ providing a force feedback via a force feedback mechanism, the force feedback being associated with the simulated interaction of the first simulated object with the second simulated object.

100. (Currently Amended) The processor-readable medium of claim 99, wherein the method further comprises providing ~~code to provide a force feedback includes code to provide~~ a restoring force that is proportional to a magnitude of a simulated penetration of the first simulated object and the second simulated object.

101. (Currently Amended) The processor-readable medium of claim 100, wherein the restoring force includes a spring force ~~having the mathematical form:~~

$$\cancel{F = kx}$$

~~where F is the restoring force, x is~~ calculated based on a magnitude of a deviation ~~of the spatial correlation including a deviation~~ between [[the]] a current location of the first simulated object and a location of the first simulated object had the simulated penetration occurred ~~and k is a spring constant parameter~~. .

102. (Currently Amended) The processor-readable medium of claim 101, wherein the ~~includes a damping force and the restoring force has the mathematical form:~~

~~$F = kx + bv$~~

~~where F is the restoring force, x is~~ calculated based on a magnitude of a deviation ~~of the spatial correspondence including a deviation~~ between [[the]] a current location of the first simulated object and a location of the first simulated object had the simulated penetration occurred, the restoring force including a damping force based on a sensed velocity of the physical object. ~~v is a function of a velocity of the physical object, and k and b are constant parameters.~~

103. (Currently Amended) The processor-readable medium of claim 102, wherein the restoring force includes an inertial force corresponding to movement of the second simulated object in response to the simulated interaction between the second simulated object and the first simulated object ~~and the restoring force has the mathematical form:~~

~~$F = kx + bv + ma$~~

~~where F is the restoring force, x is a magnitude of a deviation of the spatial correspondence including a deviation between the current location of the first simulated object and a location of the first simulated object had the simulated penetration occurred, v is a function of a velocity of the physical object, a is a function of an acceleration of the physical object, and k, b and m are constant parameters~~.

104. (Currently Amended) The processor-readable medium of claim 100, wherein the ~~code to provide the~~ restoring force includes a component associated with friction between the first simulated object and a simulated spatial environment.

105. (Currently Amended) The processor-readable medium of claim 99, wherein ~~the code to simulate~~ the second simulated object is associated with motion of a second physical object of a second computer interface device.

106. (Currently Amended) The processor-readable medium of claim 100, wherein the code to provide the restoring force includes a weighting factor such that a simulated location L of the first and second simulated objects is output on a display~~, the location L being determined by the equation:~~

$$\cancel{L =} [[\frac{(w_1 x_z + w_2 x_2)}{(w_1 + w_2)}]].$$

107. (Previously Presented) The processor-readable medium of claim 99, the interface device being a first interface device wherein the code to simulate the motion of the first simulated object is associated with a first processor, and the code to simulate the second object is associated with a second processor the second processor being associated with input from a second interface device, the first processor and the second processor being coupled such that input signals from the first interface device are associated with input signals from the second interface device.